DRAFT

Coalition for Urban/Rural
Environmental Stewardship (CURES)

To Whom It May Concern:

Re: CALFED Ecosystem Restoration System

I am writing in support of the, “Evaluate, Demonstrate and Promote Irrigation Return Flow Technologies in the San Joaquin River Watershed” project.

The San Joaquin River Management Program provides a forum to identify problems and solutions to issues related to wildlife, flood protection, water quality, water supply, fisheries, and recreation. The SJRMP Action Team and Advisory Council have reviewed and discussed this project, and support the effort to develop understanding and technologies to reduce the impacts of irrigation drainage on the San Joaquin River System.

The Advisory Council is in support of the project proposed by the CURES and understands that this project will provide information and promote technologies to improve or prevent further degradation of water quality on the San Joaquin River.

The 1995 San Joaquin River Management Plan recognizes the need to increase water quality and promote implementation through education and outreach programs. The implementation of this program will support the development of solutions that address water quality issues.

If you have any questions in this regard, please call Paula Landis at (559) 230-3310.

Sincerely,

Timothy Ramirez, Chair
San Joaquin River Management Program
Advisory Council

SUPPORTING DOCUMENTATION IS ON THE FOLLOWING PAGES

Evaluate, Demonstrate and Promote Irrigation Return Flow Technologies in the San Joaquin River Watershed

Executive Summary

September 10, 2001

Project Title: Evaluate, Demonstrate and Promote Irrigation Return Flow Technologies in the San Joaquin River Watershed.

Project Coordinator: The Coalition for Urban/Rural Environmental Stewardship (CURES), representing the San Joaquin River Ag Implementation Group (AIG).

CalFed Program: This proposal is being submitted to the CALFED Ecosystem Restoration Program.

Problem: The San Joaquin River Basin consists of nearly 16,000 square miles. The average annual surface runoff of this area is approximately 1.6 million acre feet. The lower San Joaquin River (consisting of the area from downstream of the Mendota Dam to Vernalis) is listed in the Clean Water Act Section 303d of impaired waters due to non-point source loading of pesticides, nutrients, sediment, salt, boron, selenium, and metals. Total Maximum Daily Loads (TMDL) are currently being established for these constituents.

Hypothesis: Some farmers with riparian property irrigate their fields and because of various factors, produce runoff flows that result in off-site movement of pesticides, nutrients and other constituents into the San Joaquin River and its tributaries. Currently, a number of management practices are successfully being used by farmers in the watershed to eliminate flows or reduce contaminants in the flows. These management practices offer stakeholders important tools that can be used to reduce loads of contaminants into the watershed. However, many farmers lack the knowledge of and access to these technologies, an important first step to adapting the specific practices to their crops and farming situations. Other newer technologies, such as PAM (polyacrylamide) have not been used or evaluated on a broad scale nor tested on the wide range of crops produced in the watershed.

Proposed scope of work:
The project will consist of the following three components:

- Demonstration Plots that implement, test, and evaluate existing and new technologies for managing irrigation return flows. Grower field days and tours of demonstration plots will be organized and managed.
    - Existing technologies such as recirculation systems, irrigation scheduling and manmade estuaries will be shown and costs and design options provided to farmers in the Basin area. An evaluation of their installation and maintenance costs and effectiveness in improving water quality will be carried out to determine their effectiveness in relation to achieving CALFED goals and objectives.

    - New technologies such as PAM (polyacrylamide) and biofiltration (grass filter strips, settling ponds, etc.) will be evaluated on different soil types in the San Joaquin River Basin to determine their effectiveness in reducing pesticides, nutrients, and other contaminants carried in irrigation runoff.

- Project Monitoring will measure and evaluate the effects of irrigation return flow management practices on water quality. Farmers' response to outreach activities will also be monitored through surveys and feedback questionnaires. Promising outreach approaches and management solutions with the best potential for reducing or eliminating offsite movement of pesticides and nutrients will be identified.

- Education and Outreach will include the dissemination of information and outreach to growers, pesticide dealers, watershed groups, etc. Information with regard to local contacts, funding sources, template plans will be developed, compiled, and distributed to farmers/landowners using various approaches and media to encourage installation of technologies on riparian properties. Information transfer will be also be faciliated through collaboration with pesticide and nutrient distributors, agricultural commissioners, farm advisors, commodity groups, and continuing education meetings for farmers and Pest Control Advisors (PCAs) in the watershed.

Uncertainties: Some of these management practices have not been previously evaluated for effectiveness in reducing pesticides, nutrients, and other contaminant loads in irrigation return flows. Limited economic information is available for the costs of installing and maintaining the systems on individual farms.

Because of the wide range of crops grown in the region, it is unknown whether practices successful with one crop on a specific soil type can be adapted to other crops on other soil types. Hence, there is the need to demonstrate the practices in the important crops which contribute irrigation return flows in the watershed.

The poor agricultural economy in California may hinder the widespread and immediate adoption of effective management practices. However, an assessment of true costs and multiple benefits may lead to outside financial support and a greater willingness by farmers to invest in these practices.

Project goals and objectives: This project seeks to fulfill CALFED priority # 5 for the San Joaquin River Basin, which is to "*develop understanding and technologies to reduce the impacts of irrigation drainage on the San Joaquin River and reduce transport of contaminant loads carried by the San Joaquin to the Delta and the Bay*"

The project objective is to facilitate the development and transfer of information on irrigation return flow management and technologies to farmers of riparian fields with the goal of reducing off-site movement of pesticides, nutrients, and other contaminants. This project will promote these technologies through various education and outreach programs in the San Joaquin Valley.